

REMARKS

Claims 1-2 and 4-11 will be all the claims pending in the application.

Claim 1 has been amended to recite “wherein the heat-resistant microporous layer comprises at least one heat-resistant resin selected from resins having a temperature of deflection under load of 18.6 kg/cm² pf 100° C or more.” Support for this amendment can be found, for example, on page 6, lines 3-7.

Response to the Claim Rejections Under 35 U.S.C. § 103

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 5,691,047 to Kurauchi *et al.* (“Kurauchi”).

It is asserted that Kurauchi teaches a porous multi-layer film separator for a nonaqueous electrolyte battery comprising at least three united polyolefin layers. Although, Kurauchi does not teach a spacer comprising an electrochemically stable substance, which is placed on the surface of a heat-resistant layer, it is further asserted that it would be obvious to one of ordinary skill in the art to employ a polypropylene porous film on the surface of the heat-resistant polyethylene layer.

Applicants respectfully assert that Kurauchi does not teach or suggest all of the elements recited in claim 1.

Specifically, Applicants submit that Kurauchi neither teaches nor suggests a heat resistant microporous layer comprising least one heat-resistant resin selected from resins having a temperature of deflection under load of 18.6 kg/cm² pf 100° C or more as recited in claim 1. The

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polypropylene taught by Kurauchi is clearly outside the scope of claim 1 since its temperature of deflection under load of (according to JIS K 7207) is 49-60° C.

Applicants submit that one of ordinary skill in the art would not be motivated to modify the teachings of Kurauchi in order to arrive at the present invention. Kurauchi does not suggest increasing the temperature of deflection under load (according to JIS K 7207).

Applicants further submit that Kurauchi fails to suggest the unexpected benefits of the claimed combination of a heat-resistant porous layer and a spacer. Comparative Example 1 on page 29 demonstrates that a composite film form without a spacer does not exhibit adequate electrochemical oxidation resistance. Thus, the presently claimed invention is unobvious in view of the teachings of Kurauchi.

Accordingly, Applicants respectfully request that the claim rejections under 35 U.S.C. § 103 be withdrawn.

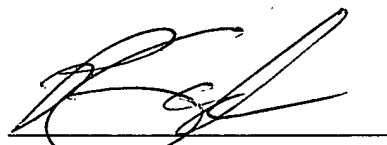
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'P. Gallagher', written over a horizontal line.

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